

B. AMENDMENTS TO THE CLAIMS

Please amend the claims in accordance with the following complete listing of all claims in the application:

Claims 1-7 (cancelled)

Claim 8 (new): A vacuum-insulated building panel comprising:

- (a) an exterior plate having perimeter edges, and an identical interior plate having perimeter edges, said exterior and interior plates being juxtaposed to each other and separated at their perimeter edges by a post frame comprising a plurality of post members, thereby forming a vacuum chamber defined by the exterior and interior plates and said post frame;
- (b) bolt means connecting the exterior and interior plates to the post frame at a selected anchor point along the perimeter of the building panel;
- (c) a lattice frame disposed within the vacuum chamber and comprising a network of cross members, said cross members forming a plurality of quadrangular sub-chambers within the vacuum chamber; and
- (d) disposed centrally within each of one or more of said sub-chambers, a spherical spacer having a diameter corresponding to the thickness of the post frame;

wherein:

- (e) air may be partially evacuated from the vacuum chamber to create a vacuum therein, and thus biasing the exterior and interior plates toward each other, with their perimeter edges contacting the post frame, and with separation of middle regions of the plates maintained by the spherical spacers;
- (f) the vacuum within the vacuum chamber provides the sole means for maintaining the perimeter edges of the exterior and interior plates in airtight sealing contact against the post frame, thereby permitting in-plane thermally-induced movement of either plate relative to the post frame without impairing the airtightness of the vacuum chamber; and

- (g) each spherical spacer is contained in a sling that holds it in position when the building panel is not under vacuum, while permitting it to roll within its sub-chamber in response to thermally-induced relative movement between the inner and outer plates when the building panel is under vacuum, said sling comprising girdle means which loosely encircles the spherical spacer without preventing the spherical spacer from rolling, said sling being connected to the lattice frame by a pair of elongate ties extending in opposite directions away from the girdle means, said ties incorporating tensioning means, and said opposite directions being in substantially alignment with the anchor point of the building panel;

whereby warping due to differential expansion or contraction of the inner and outer plates when the building panel is under vacuum is prevented by the inner and outer plates' ability to slide relative to the post frame.

Claim 9 (new): A vacuum-insulated building panel as in Claim 8 wherein the post members are made from a material comprising wood.

Claim 10 (new): A vacuum-insulated building panel as in Claim 8 wherein the post members are made from a material comprising plastic.

Claim 11 (new): A vacuum-insulated building panel as in Claim 8 wherein the post frame is quadrangular in shape.

Claim 12 (new): A vacuum-insulated building panel as in Claim 8 wherein at least one of the ties comprises cord.

Claim 13 (new): A vacuum-insulated building panel as in Claim 8 wherein at least one of the ties comprises wire.

Claim 14 (new): A vacuum-insulated building panel as in Claim 8 wherein the tensioning means comprises a coil spring.

Claim 15 (new): An assembly of two or more vacuum-insulated building panels as defined in Claim 8, wherein:

- (a) the building panels are erected above ground level in association with a building frame;
- (b) the post frames of the building panels are erected in a contiguous manner, with each two adjoining panels being served by a single post; and
- (c) temperature-induced contraction of the overall post frame structure of the building panel assembly is accommodated by erecting the building panels spaced away from the building frame, and unattached to the building frame except at a single location on the roof of the building.

Upon entry of the proposed amendments, the claims pending in the application will be Claims 8-15.